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JUL 21 2006

Remarks

This communication is considered fully responsive to the Office Action mailed May 30, 2006 and made Final (the "Final Office Action"). Claims 12-19 were previously withdrawn. Claims 1-11 and 20-27 were examined. Claims 1-11 and 20-27 stand rejected. Claims 1 and 5 are amended. No claims are canceled. No new claims have been added. Reexamination and reconsideration of claims 1-11 and 20-27 are respectfully requested.

Examiner Interview

Applicant appreciates the two telephone interviews the Examiner afforded Mark Trenner (Reg. No. 43,961) on behalf of Paul White and the Applicant. During the first telephone interview on July 6, 2006, Mr. Trenner explained that U.S. Patent Application No. 2002/0189545 to Matsumura, et al. (hereinafter "Matsumura") does not disclose supplying excess hydrogen in amounts sufficient to form conformal silicon nitride. Instead, Matsumura discloses supplying only sufficient hydrogen to prevent the deterioration of the heating element (see, e.g., paragraph [0129]). Although U.S. Patent No. 6,806,149 to Bu, et al. (hereinafter "Bu") briefly mentions "depositing a conformal layer of silicon nitride over the silicon oxide layer" (col. 3, lines 7-9), Bu fails to disclose the use of excess hydrogen to achieve this. The Examiner asked if there was a specific amount of hydrogen that was necessary to form conformal silicon nitride.

After consulting with one of the inventors, Mr. Trenner again spoke with the Examiner by telephone on July 19, 2006. Mr. Trenner explained that while a specific amount of hydrogen would depend on a number of parameters (e.g., the chamber size and configuration), more hydrogen is necessary to form conformal silicon nitride than what is used by Matsumura to prevent deterioration of the heating element. As further

evidence, the inventors cite a scientific paper by Matsumura entitled "Coverage properties of silicon nitride film prepared by the Cat-CVD method," in which Matsumura admits on page 167 that they were only able to obtain about 20-33% coverage with their silicon nitride.

Accordingly, Mr. Trenner proposed amending the claims to clarify that excess hydrogen is being supplied in an amount sufficient to form a substantially 100% conformal silicon nitride film. Support for this amendment is found in Applicant's specification as originally filed, e.g., on pages 4 and 7, and by the SEM image shown in FIG. 2. The examiner said that Applicant's proposed amendment and additional evidence sounded reasonable and that he would reconsider the rejections if the Applicant filed an RCE.

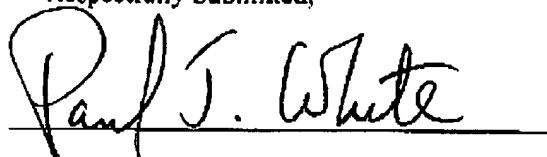
Applicant's Arguments

Applicant believes that the rejections in the Final Office Action are moot in view of the amendment and additional evidence, as discussed above. However, Applicant makes no admissions as to the propriety of any of the rejections. Applicant hereby incorporates by reference all of the arguments previously presented in the Response to the first Office Action, and expressly reserves the right to traverse these rejections on substantive grounds if any of the rejections are maintained in a subsequent Office Action.

Conclusion

The Applicant respectfully requests that a timely Notice of Allowance be issued in this matter. If there are any matters that may be clarified by telephone, the examiner is urged to contact Applicant's attorney at the telephone number listed below.

Respectfully Submitted,

A handwritten signature in black ink, reading "Paul J. White", is written over a horizontal line.

Paul J. White
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Reg. No. 30436

Dated: July 21, 2006

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